



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,235	02/27/2004	Hiroshi Nishikawa	325772034600	4822
<div>7590 Barry E. Bretschneider Morrison & Foerster LLP Suite 300 1650 Tysons Boulevard McLean, VA 22102</div>				
12/02/2009				
EXAMINER				
ZHU, RICHARD Z				
ART UNIT		PAPER NUMBER		
2625				
MAIL DATE		DELIVERY MODE		
12/02/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/787,235

Applicant(s)

NISHIKAWA ET AL.

Examiner

RICHARD Z. ZHU

Art Unit

2625

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/22/2009 has been entered.

Response to Applicant's Arguments

2. Upon an updated search and further considerations, previous grounds of rejections are withdrawn in favor of new grounds of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C 112 that form the basis for the rejections under this section made in this office action:

[2nd Paragraph] The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 and 4-11 are rejected under 35 USC 112 2nd paragraph as failing to particularly pointing out and distinctly claiming applicant's invention.

Claims 1, 4, and 11 requires "a distance between the reading transparent member and the first portion of the original document is less than approximately 0.3mm at the location over the original document reading position". However, the scope of the limitation "approximately 0.3mm" is indefinite because it could encompass any range between any value less than 0.3mm to, for example, 1mm, 10mm, 100mm, and so on and so forth. All remaining claims are dependent upon claims 1, 4, and 11 and are therefore indefinite for the same reason.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 11 are rejected under 35 USC 103(a) as being unpatentable over *Yamanaka (US 7196827 B2)* in view of *Kawachi (JP 11-146140 A)*.

Regarding Claims 1 and 11, *Yamanaka* discloses an image reading apparatus (Fig 1) and a spacer to be used for the image reading apparatus which has a reading transparent member and a reading unit that reads through said reading transparent member an image of an original document that is being conveyed over an original document reading position of said reading transparent member (Fig 5, Jump Stand 162) comprising:

a reading transparent member (Fig 5, Platen Glass Plate 161);

a reading unit that reads through said reading transparent member an image on an original document that is being conveyed over an original document reading position of said reading transparent member (**Fig 2, Reader Portion 150 in view of Col 3, Rows 35-42, Fig 5, Original Reading Position 160. See Col 3, Row 66- Col 4, Row 7, Reader Portion reads an original conveyed over Original Reading Position as it is being conveyed over by a plurality of rollers**); and

a spacer that is mounted on said reading transparent member on a surface thereof opposite the side thereof at which said reading unit is disposed and at a position upstream from the original document reading position relative to an original document conveyance direction (**Fig 5 and see Col 6, Rows 39-41, Jump Stand 162**),

wherein the spacer is configured such that height of a downstream end thereof relative to the original document conveyance direction decreases toward the downstream direction (**Fig 5, Jump Stand's height decreases toward the downstream direction**);

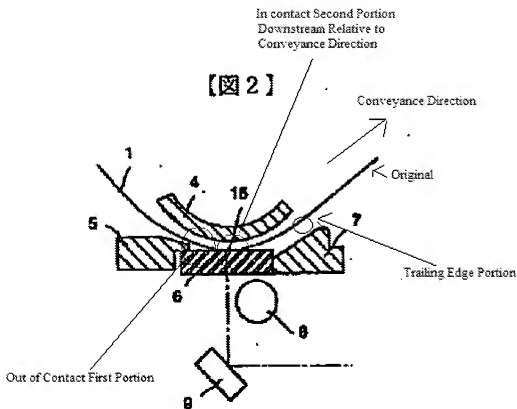
the spacer is configured to cause an original document to be convey over the reading transparent member at a location over the original document reading position such that a first portion of the original document is conveyed over the original document reading position and a trailing edge portion of the original document passes a position very close to or in contact with a sloping surface of the spacer (**Col 10, Rows 25-50 and see also the second embodiment in Col 11, Rows 11-65, the original is transported horizontally with respect to the platen glass plate, Col 11, Rows 60-65 and Col 11, Rows 40-45, original is transported from above or while being upwardly bent**);

a distance between the reading transparent member and the first portion of the original document is less than 0.3mm at the location over the original document reading position (Col 7, Rows 1-10, the structure of the scanner is such that a gap of 0.15 to 0.5mm, with a preferred setting at 0.3mm, is allowed for the passage of a paper original over the glass platen. In particular, 0.15 to 0.29mm reside within the range as required by the claimed limitation).

Yamanaka does not disclose the spacer is configured to cause the first portion of the original document to be out of contact with the reading transparent member at a location over the original document reading position and a second portion of the original document to come in contact with the reading transparent member at a location downstream from the original document reading position relative to the original document conveyance direction as the first portion of the original document is conveyed over the original document reading position and a trailing edge portion of the original document passes a position very close to or in contact with a sloping surface of the spacer.

However, the absence of disclosure of such feature is not the proof that *Yamanaka* lacks such feature or that the feature is not inherent. For example, *Kawachi* discloses a scanner configuration substantially equivalent to that of *Yamanaka* comprising a spacer that causes a first portion of an original document to be out of contact with a reading transparent member at a location over an original document reading position and a second portion of the original document to come in contact with the reading transparent member at a location downstream from the original document reading position relative to an original document conveyance direction as the first portion of the original document is conveyed over the

original document reading position and a trailing edge portion of the original document passes a position very close to or in contact with a sloping surface of the spacer (**Drawings 2 and 3, Spacer 7**):



Given the substantial equivalent structure of *Kawachi* in relations to *Yamanaka*, *Kawachi* demonstrated that the structure of *Yamanaka* would inherently result in the feature required by the claim. As a result, *Yamanaka* is construed to have anticipated or otherwise render obvious the invention of Claim 1 in light of evidence provided by *Kawachi*. Since no modification is deemed necessary because *Yamanaka* already has the structure, there is no need to combine the two references and hence no motivation for combination is provided.

7. Claims 4-10 are rejected under 35 USC 103(a) as being unpatentable over *Yamanaka (US 7196827 B2)* in view of *Kawachi (JP 11-146140 A)* and *Kitani et al (US 5352883 A)*.

Regarding Claim 4, *Yamanaka* discloses an image reading apparatus (Fig 1) comprising:

a reading transparent member (**Fig 5, Platen Glass Plate 161**);

a reading unit that reads through said reading transparent member an image on an original document that is being conveyed over an original document reading position of said reading transparent member (**Fig 2, Reader Portion 150 in view of Col 3, Rows 35-42, Fig 5, Original Reading Position 160. See Col 3, Row 66- Col 4, Row 7, Reader Portion reads an original conveyed over Original Reading Position as it is being conveyed over by a plurality of rollers**); and

a spacer that is mounted on said reading transparent member on a surface thereof opposite the side thereof at which said reading unit is disposed and at a position upstream from the original document reading position relative to an original document conveyance direction (**Fig 5 and see Col 6, Rows 39-41, Jump Stand 162**),

wherein the spacer is configured such that height of a downstream end thereof relative to the original document conveyance direction decreases toward the downstream direction (**Fig 5, Jump Stand's height decreases toward the downstream direction**);

the spacer is configured to cause the first portion of the original document to be out of contact with the reading transparent member at a location over the original document reading position and a second portion of the original document to come in contact with the reading transparent member at a location downstream from the original document reading position

relative to the original document conveyance direction as the first portion of the original document is conveyed over the original document reading position and a trailing edge portion of the original document passes a position very close to or in contact with a sloping surface of the spacer (Col 10, Rows 25-50 and see also the second embodiment in Col 11, Rows 11-65. As noted in the rejections of Claims 1 and 11, *Kawachi* provides the evidence that this feature is inherent and thus taught by *Yamanaka*);

a distance between the reading transparent member and the first portion of the original document is less than 0.3mm at the location over the original document reading position (Col 7, Rows 1-10, the structure of the scanner is such that a gap of 0.15 to 0.5mm, with a preferred setting at 0.3mm, is allowed for the passage of a paper original over the glass platen. In particular, 0.15 to 0.29mm reside within the range as required by the claimed limitation).

Yamanaka does not disclose the spacer comprises a lower surface member that comes into contact with said reading transparent member and an upper surface member that comes into contact with the original document during conveyance of the original document wherein such members are glued together to form a step configuration where the height of the steps decrease toward a downstream direction, and said upper surface member is made of a material having both a lower friction coefficient and a superior wear resistance than a material of said lower surface member.

Kitani discloses a spacer in an image processing apparatus comprising a lower surface member that comes into contact with a reading transparent member (Fig 12, Guide Means 7 contacting light transmissive sensor substrate 1, Col 7, Rows 21-28) and an

upper surface member that comes into contact with the original document during conveyance of the original document (**Fig 12, low frictional layer 119**) wherein such members are glued together to form a step configuration where the height of the steps decrease toward a downstream direction (**Fig 12, there is a leap between the decrease toward downstream direction of surface 119 and protection layer 2 on top of substrate 1, therefore it is a step configuration**), and said upper surface member is made of a material having both a lower friction coefficient and a superior wear resistance than a material of said lower surface member (**Col 12, Rows 61-68**).

Given the fact that guiding means 7 and layer 119 forms the spacer of *Kitani* serves the same functional purpose in terms of paper conveyance, it would've been eminently desired by one of ordinary skill in the art at the time of the invention to modify the Jump Stand or spacer of *Yamanaka* to have a lower surface member and a low friction upper surface member in order to "stably conveying an original sheet by reducing the friction acting between the original sheet P and guide means" (*Kitani*, **Col 12, Rows 60-64**).

Regarding Claim 5, *Yamanaka* did not specify the thickness of its jump stand.

However, *Kitani* specified that at least the lower surface member or guide means be at least 0.3mm or less (**Col 14, Rows 48-51**).

Although the reference does not suggest that the upper surface member being .4 mm, however MPEP 2144.05 states that "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation". See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) and *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969).

Therefore it would've been well within the skill of one of ordinary skill in the art at the time of the invention to discover the optimal thickness of upper surface member through routine experimentation to obtain, for example, the dimensional of 0.4mm in thickness for the upper surface member.

In order for the requirement of dimensional limitation such as thickness of upper surface member as well as limitations in the subsequent claims to be patentable over the prior art, the prior arts must not recognize these dimensional limitations as result effective variables; that is, there is neither suggestion or teaching within the applied prior arts to suggest that these variables should be optimized and therefore one of ordinary skill in the art would not be motivated to perform routine experimentation involving said limitations, see *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)¹. This is not the case in the instant application because at least *Kitani* recognizes the thickness of at least guide means 7 to be a variable relevant to the performance of the apparatus (**Col 14, Rows 48-51**). Therefore, one of ordinary skill in the art at the time of the invention would be motivated to perform routine experimentation to find the most optimal thickness for both the guide means 7 and low frictional layer 119 because the frictional layer is an integral part of the spacer comprising the two components in at least one disclosed embodiment (**Fig 13**). Therefore, in the instant

¹ See Page 8, "The controlling question is simply whether the differences (namely the value of 0.12 and its property) between the prior art and appellant's invention as a whole are such that appellant's invention as a whole would have been obvious. The answer is no. It is impossible to recognize, from the experiment taught by El-Naggar, that "treatment capacity" is a function of "tank volume" or the tank volume-to-contactor area ratio. Recognition of this functionality is essential to the obviousness of conducting experiments to determine the value of the "tank volume" ratio which will maximize treatment capacity. Such functionality can *only be determined* from data representing either efficiency at varying tank volume, fixed throughput, and fixed contactor area or throughput at varying tank volume, fixed efficiency, and fixed contactor area. Each of these experiments represents treatment capacity with fixed contactor area but varying tank volume. This sort of experiment would not be suggested by the teachings of El-Naggar since he was not trying to maximize or control "treatment capacity." The experiments suggested by El-

case, the dimensional limitation required by the applicant does not distinguish over the prior art because it does not offer any advantage or unexpected result that would not have been recognized by one of ordinary skill in the art through routine experimentation, see *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984)².

Regarding Claim 6, *Yamanaka* does not disclose the protrusion of lower surface member relative to that of an upper surface member.

Kitani discloses in one embodiment that a downstream end of a lower surface member relative to the original document conveyance direction protrudes from beyond that of said upper surface member in the downstream direction (**Fig 14, protrusion of guide means 7 relative to support member 148**).

It would've been obvious to one of ordinary skill in the art at the time of the invention to modify the jump stand of *Yamanaka* in the manner of *Kitani* described above because such configuration would effectively prevent paper jamming from occurring (**Col 14, Rows 7-18**).

And for the same reasons stated above, it would've been obvious to one of ordinary skill in the art to perform routine experimentation to find out the dimension of the protrusion

Naggar do not reveal the property which applicant has discovered, and the PTO has provided us with no other basis for the obviousness of the necessary experiments".

² See Page 784, "Having considered carefully all of the trial testimony and the numerous demonstrations and exhibits, the Court previously concluded that these requirements were empty formulae that had no relationship to any of the principles of fluid mechanics or phenomena thereof which were demonstrated in the trial. To this Court, they were incantations that may have superficially made the application sound like something unique and inventive but had no real function. So far as this poor observer could conclude, adherence to these dimensional mandates did not produce any discernible result or any synergistic [sic] effect. Nor did departure therefrom cause a failure of the web support. Surely, the patent law does not attach uniqueness to dimensional claims that have no significance in the operation of the claimed invention".

given the fact that *Kitani* recognized such protrusion as necessary in optimizing the performance of the apparatus in at least preventing paper jamming.

Regarding Claim 7, *Yamanaka* discloses wherein said reading position is placed at a predetermined position from the downstream end of said lower surface member toward the downstream direction (Fig 5 in view of Col 7, Rows 39-41, although the disclosure specifies using roller 24a as point of reference in determining a predetermined amount of distance, however, similar to Jump Stand 162, roller 24a is a fixed point of reference at a fixed amount of distance from Jump Stand 162. Relatively speaking, the fixed point of reference can be used to determined the distance between the read position 160 and Jump Stand 162 by adding a constant representing the distance between the roller and the jump stand because the two components abut each other).

Although the reference does not disclose that said reading position is placed at 3mm from the downstream, it would've been well within the skill of one of ordinary skill in the art to determine the optimal position through routine experimentation because *Yamanaka* clearly recognized the necessity to derive the optimal predetermined amount through experimentation in order to prevent blurred and fogged image (Col 7, Rows 49-55).

Regarding Claim 8, *Yamanaka* discloses wherein there is an interval between said reading transparent member and an original document conveyance path at said original document reading position that is 0.2mm (Col 7, Rows 1-10, 0.2 is inclusive within the range of 0.15 to 0.5mm).

Regarding Claims 9-10, *Yamanaka* does not disclose the material that forms the upper surface member and the lower surface member.

Kitani disclose the upper surface member is formed by a film made of high polymer polyethylene (Col 12, Rows 65-68) or fluorine resin (Col 12, Rows 65-68, Teflon is generally known in the industry as a form of polytetrafluoroethylene or a form of fluorine resin) and the lower surface member is formed by a film made of polyester (Col 7, Rows 21-27).

Given the fact that guiding means 7 and layer 119 forms the spacer of *Kitani* serves the same functional purpose in terms of paper conveyance, it would've been eminently desired by one of ordinary skill in the art at the time of the invention to modify the Jump Stand or spacer of *Yamanaka* to have a lower surface member made of polyester and a lower friction upper surface member made of Teflon or polyethylene in order to "stably conveying an original sheet by reducing the friction acting between the original sheet P and guide means" (*Kitani*, Col 12, Rows 60-64).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Richard Z. Zhu whose telephone number is 571-270-1587 or examiner's supervisor King Y. Poon whose telephone number is 571-272-7440. Examiner Richard Zhu can normally be reached on Monday through Thursday, 0630 - 1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RZ²
10/23/2009

*/Richard Z. Zhu/
Assistant Examiner
Art Unit 2625*

/King Y. Poon/

Supervisory Patent Examiner, Art Unit 2625